

Claims

1. Conveyor belt comprising a layered composite of:

i) a textile ply (1) with a first ply surface (11) and a second ply surface (12);

5 ii) a first plastic layer (2), which adheres to the first ply surface (11), of a thermoplastic plastic with a creeping strength v_k of at the most 0.005 at 30°C, which contains at least 70 percent by weight of a thermoplastic with a creeping strength v_k of at the most 0.005 at 30°C; and

10 iii) a second plastic layer (3), which adheres to the second ply surface (12), of a thermoplastic plastic with a creeping strength v_k of at the most 0.005 at 30°C, which contains at least 70 percent by weight of a thermoplastic with a creeping strength v_k of at the most 0.005 at 30°C;

15 with the proviso that the quotient r_v gives a value in the range of 5 to 25 according to the following Formula (I):

$$r_v = \frac{V_B \rho_T}{G_T} - 1 \quad (I),$$

wherein V_B denotes the volume per unit area of the said

20 layered composite and ρ_T denotes the density of the textile ply (1), and G_T denotes the weight per unit area of the textile ply (1).

2. Conveyor belt according to claim 1, characterised

in that the thermoplastic plastics of the plastic layers (2)

25 and (3) each contain at least 95 percent by weight of a thermoplastic with a creeping strength v_k of at the most 0.005 at 30°C.

3. Conveyor belt according to claim 2, characterised in that the thermoplastics are selected from TPE-A such as PEBA, in particular poly(poly{tetramethylene ethylene glycol}-b-poly{ ω -laurinlactam}), poly(poly{tetramethylene ethylene glycol}-b-poly{ ϵ -caprolactam}), poly(polyethylene oxide-b-poly{ ω -laurinlactam}) and poly(polyethylene oxide-b-poly{ ϵ -caprolactam}); TPE-E such as poly(poly{tetradecakis[oxytetramethylene]oxyterephthaloyl}-b-poly{oxytetramethylene oxyterephthaloyl}); TPE-U, in particular TPE-U produced from polyesterdiols and diisocyanates, and the ethylene- α -olefin-copolymers with ratio of weight average molecular weight M_w to number average molecular weight M_n of 5.0 : 1 to 1.5 : 1.

4. Conveyor belt according to any one of claims 1 to 3, characterised in that the two layers (2) and (3) consist of the same thermoplastic plastic.

5. Conveyor belt according to any one of claims 1 to 4, characterised in that the textile ply (1) is non-woven.

6. Conveyor belt according to any one of claims 1 to 5, characterised in that the separation resistance between layer (2) and textile ply (1) and between layer (3) and textile ply (1) is in each case at least 2.5 N/mm, measured according to the standard DIN 53530.

7. Conveyor belt according to any one of claims 1 to 6, comprising a top coating.

8. Conveyor belt according to any one of claims 1 to 7, containing anti-bacterial means in the layer (2) and/or

the layer (3) and/or the optional top coating.

9. Conveyor belt according to any one of claims 1 to 8, characterised in that it has a symmetrical layer construction around the textile ply (1).

5 10. Conveyor belt according to any one of claims 1 to 9, with a width of 50 to 5000 mm.

11. Endless conveyor belt according to any one of claims 1 to 10, comprising a butt end-to-end joint.

10 12. Conveyor belt according to any one of claims 1 to 10, comprising two butt ends.

13. Method for making a conveyor belt according to claim 1 endless, wherein this method comprises:

- i) providing the conveyor belt with butt ends,
- ii) welding together of the butt ends.